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Dear Sir:

New organization, Atomic Energy Services, department of RCA Service Co., will offer to manufacturers generally nation-wide installation and servicing of nuclear and radiation equipment. While RCA Service Co. (division of Radio Corp. of America) has been active in the atomic energy field for some time, it is now offering nation-wide for the first time a wide range of services. Major activity will be providing warranty and non-warranty maintenance for manufacturers of nuclear equipment. Other services will include installation, inspection and instrumentation of equipment, systems and field engineering, technical publication preparation, etc. Operations will be out of the presently set up four offices: New York, N.Y.; Camden, N.J.; Woodland, Calif.; and Livermore, Calif. (Other MANUFACTURERS' NEWS, p. 5 this LETTER.)

Of five proposals responding to an USAEC invitation to cooperatives and public power bodies to operate a small nuclear power plant, three were completely unacceptable. These came from the cities of Detroit, Mich.; Ft. Pierce, Fla.; and Miamisburg, Ohio. Two of the proposals met with the Commission's approval except for the reactor sites. The two came from the city of Jamestown, N.Y., and Dairyland Power Cooperative, Lacrosse, Wisc.; they have been given two months time to suggest alternate sites. (The proposed plant under this proposal would use a pressurized water reactor with a conventionally-fueled superheater to generate about 22,000 kw of electrical energy; it would mainly be a study to determine possibility of economic operation of a plant of such size.) (Other CONTRACT NEWS, p. 2 this LETTER.)

Trade-named "Decon-Kit" is an emergency radioactivity decontamination unit offered by Tracerlab, Inc., Waltham, Mass. Consisting of a heavy gauge steel case containing respirator, disposable clothing, decontamination solutions, and an instruction manual, the company feels that it will take its place alongside the fire extinguisher and other safety equipment as a standard isotope laboratory accessory. (Other PRODUCT NEWS, p. 5 this LETTER.)

Regular monthly report on radiological health data (prepared by the U.S. Public Health Service) is now being published by Office of Technical Services, Wash. 25, D.C. First issue is April, 1960; every third issue will be expanded into a quarterly report. It may be ordered as PB 161371, Radiological Health Data, from the OTS at 50¢ a single issue or $3 for a six-months subscription. Each issue contains statistics on current radiation levels in such environmental media as air, water, milk and other foods; the data is being collected by Federal, state and local agencies and research groups. .....Biological effects of ionizing radiation are discussed in the National Academy of Sciences' new "Report to the Public" issued last week. It brings up-to-date a similar report issued by the Academy in 1956. The new report notes that while levels of radioactivity in food, particularly strontium-90 and radioiodine, have been increasing in the last few years, they "remain well below those that need to be considered cause for alarm". (Other BOOKS, PUBLICATIONS, p. 4 this LETTER.)

CONTRACTS LET, BIDS ASKED...

BIDS ASKED: Proposals are being sought from U. S. firms to produce enriched uranium billets needed for initial inventories for the New Production Reactor, now under construction at Hanford, Wash. Soliciting of these proposals is being done by General Electric Co., operating contractor at Hanford. The uranium hexafluoride, slightly enriched in U-235, needed for the production of billets, would be supplied by the USAEC. Delivery of the billets would start September 1960, and they will be further processed at Hanford by GE into fuel elements. Information on the proposal and an unclassified pre-proposal conference to be held at Richland May 20 may be obtained from James E. Travis, Hanford Operations Office, USAEC, Richland, Wash.

Invitations to bid on approximately 1.5 million pounds of fused vanadium pentoxide have been asked by the USAEC's Grand Junction, Colo. office. Bidding deadline is May 23. Twenty-two lots are being offered for sale. They range from about 42,000-lbs. to 102,000-lbs., with the average size lot about 64,000-lbs. The material is packed in 30 and 55-gal. steel drums. Now stored at Grand Junction, the vanadium is part of the material bought over the years by the USAEC from the uranium processing mills.

CONTRACTS AWARDED: Contract has been awarded by the USAEC to National Carbon Co. to furnish 379,000 pounds of graphite for the Experimental Gas-Cooled Reactor under construction at Oak Ridge, Tenn. Under terms of the contract, National Carbon Co. division of Union Carbide Corp., New York, will furnish 120 machined graphite columns for the reactor core. The bulk of the columns will be approximately 16 inches square by 20 feet long, providing necessary channels for fuel assemblies, control rods and other instrumentation, and eight experimental loops for the research and development program connected with the reactor.

Agreement has been reached by the USAEC with Consumers Power Co., Jackson, Mich., and General Electric Co., San Jose, Calif., on the bases for contractual arrangements for nuclear power plant with initial electrical generating capacity of 50,000 kw. The reactor used would be of the high power density boiling water type. Plant would be located on a site owned by Consumers Power at Big Rock Point, Charlevoix County, Mich. Under the agreement, Consumers Power would handle design, construction and operation of the nuclear power plant which is expected to achieve criticality in September 1962. Consumers estimates that capital costs, including site and site preparation would be over $27 million. The USAEC will support pre-and post-construction research and development by GE to a maximum of about $3.7 million subject to escalation not to exceed 10% upward. Research and development by Consumers Power, after construction, will also be supported by the USAEC to $500,000.

Uranium concentrate purchase contract between the USAEC and Dawn Mining Co., operators of a 400-ton per day uranium processing mill at Ford, Washington, has been extended to Dec. 31, 1966. The new contract replaces the original one which would have expired Mar. 31, 1962. (On Nov. 24, 1958 the USAEC agreed to purchase certain quantities of uranium oxide in the 1962-1966 period from ore reserves developed prior to Nov. 24, 1958. Dawn's contract is in this category; several other processing mill contracts have been similarly extended in recent months.)

MEETINGS, COURSES, CONFERENCES...

MEETINGS: Society of Automotive Engineers' Summer meeting, June 5-10, 1960, Chicago, will have a session on Tracers in Machining. Full program may be obtained from SAE, 485 Lexington Ave., New York, N.Y.

Combined meeting will be held Oct. 12-14, 1960, at Gatlinburg, Tenn., to include the Fourth Conference on Analytical Chemistry in Nuclear Reactor Technology, and the First Conference on Nuclear Reactor Chemistry. Programs of the two conferences, will be presented concurrently. Full information may be obtained from the sponsoring organization, Oak Ridge National Laboratory, P.O. Box Y, Oak Ridge, Tenn.

EXPERIMENTAL WORK...

CRITICAL EXPERIMENTS FACILITY: The Martin Co., Baltimore, intends to construct a critical experiments facility at its laboratory near Middle River, Md., to handle USAEC contract work. The criticality of slightly enriched uranium oxide pellets will be tested.

NUCLEAR ROCKET PROPULSION REACTORS: Preliminary experiments in the 1960 program of testing experimental rocket propulsion reactors are now underway at the USAEC's Nevada Test Site. Cold flow checks are being run on a mockup of Kiwi-A Prime, a device which is scheduled to be tested this Summer.

RAW MATERIALS...prospecting, mining, marketing...

AUSTRALIA: First full year of operation of Mary Kathleen Uranium Ltd. resulted in production of some 1.5 million lbs. of uranium oxide during 1959, with a trading profit of nearly £A2 million for the year. Sales of the concentrates, made to the U. K. Atomic Energy Authority, were at the maximum price paid by the Authority. The company now holds contracts running until 1964; after that, it must dispose of its concentrates on the open market.

CANADA: Stanleigh Uranium Mining Corp. has received bids from three major uranium producers for the undelivered poundage of uranium precipitates remaining to complete its contract. Making the offers were Denison Mines, Gunnar Mines, and the Rio Tinto group. Stanleigh had original contract for delivery of over $90 million worth of uranium precipitates; against this there still remains some 5 million lbs. to be delivered.

Faraday Uranium has decreased operations to around 65,000-lbs. of uranium oxide per month, and expects to maintain that rate so the company may realize the best ultimate profit over the life of its contract with Eldorado Mining & Refining. Net profit for the first three months of 1960 was $582,000 compared with $247,000 earned in the like period in 1959, A. H. Johnston company president states in the company's quarterly report. Gross revenue for the 1960 quarter was $2,612,000. (Situations outside the uranium field are being examined by Faraday; a main exploration project is the underground work being done at Nickel Mining & Smelting Corp.'s nickel mine at Gordon Lake, Northwestern Ontario. Faraday has provided Nickel Mining with $175,000 through purchase of 350,000 shares at 50¢).

UNITED STATES: Western Gold & Uranium, Inc., which completed a development program at its Orphan mine in the Grand Canyon last Fall, financed the $1.2 million job without recourse to either bank loans or equity financing and had earnings for the year ending Jan. 31, 1960, of $419,338 or 26¢ per share. Net the previous year was $632,236. The development transforms the Orphan from a 1,000-ton per month aerial tramway operation to a complete shaft and tunnel facility capable of producing more than 8,000 tons per month. A level of 6,500 tons had been reached in April of this year.

ATOMIC ENERGY FINANCIAL NEWS...

LOSS SUFFERED BY CONTRACTOR ON NUCLEAR POWER STATION: Associated Electrical Industries Ltd., British electrical equipment manufacturer, suffered a loss on the Berkeley nuclear power station on work which it undertook on contract for the Central Electricity Generating Board. The company set aside £750,000 out of trading profits for 1959 to provide for such losses. As to whether this would fully cover such losses, Lord Chandos, chairman of AEI, told the company's recent annual meeting in London that there were "many unknowns". He noted that besides the contract losses, AEI contributed £600,000 to the running expenses of the AEI/John Thompson Nuclear Energy Co., of which AEI owns two-thirds.

PROFITABLE FIRST QUARTER FOR DIVERSIFIED FIRM IN NUCLEAR FIELD: Vitro Corp. of America, which has divisions in various phases of nuclear work, had profitable operations for the first quarter of 1969, J. Carlton Ward, president, told shareholders at the company's annual meeting in New York last fortnight. He said that Vitro operated profitably for each month of the first quarter and expects this to continue throughout the year. Vitro has had losses for the years 1959, and 1958.

ATOMIC ENERGY BUSINESS NEWS...

NUCLEAR POWER PLANTS PLANNED: Southern California Edison Co. will begin negotiations on contracts to build a nuclear power station expected to cost some $70 million. The utility has sent letters of intent for the design and erection of a 360,000 kw station to Bechtel Corp., and Westinghouse Electric Corp., at a site yet to be selected. Westinghouse is to supply closed cycle water reactor and the steam and electrical equipment for the plant. Bechtel would be the engineering constructor. Approval of the USAEC and the California Public Utilities Commission must be obtained for the project which is expected to generate electricity at a cost competitive with West Coast power plants using conventional fuels.

The cities of Los Angeles and Pasadena, Calif., have proposed to the USAEC that a 50,000 kw nuclear power plant be constructed in San Francesquito Canyon, north of Los Angeles. Under the proposal, the USAEC would build and own the reactor portion, estimated to cost $5 million to build. Los Angeles and Pasadena each would contribute $5 million for the power generating facilities.

ATOMIC ENERGY PATENT DIGEST...

PATENTS ISSUED April 26, 1960 to PRIVATE ORGANIZATIONS AND/OR INDIVIDUALS: (1) Method of sterilizing. Arno Brasch, Wolfgang Huber, Adnan Waly, inventors. Reissue No. 24,814 assigned to Eletronized Chemicals Corp., Brooklyn, N.Y. (2) Promotion of chemical reactions. Simon L. Ruskin, inventor. No. 2,934,481 assigned to Union Carbide Corp., New York. (3) Apparatus for the electric charging by means of radioactive preparations of matter suspended in a gas stream. Robert Leupi, Johann Schedling, inventors. No. 2,934,648 assigned to G.A. Messen-Jaschin, Sarnen, Switzerland. (4) Dosimeter and method of determining radiation dose. Howard W. Etzel, James H. Schulman, James G. Allard, inventors. No. 2,934,651 issued to inventors of record. (5) Selected scattered gamma-ray density logging. Richard L. Caldwell, Gustave L. Hoehn, Jr., Tom W. Bonner, inventors. No. 2,934,652 assigned to Socony Mobil Oil Co., Inc., New York.

PATENTS ISSUED April 26, 1960 to GOVERNMENTAL ORGANIZATIONS: (1) Decontamination of plutonium-aluminum alloy material. Donald E. McKenzie, inventor. No. 2,934,424 assigned to Atomic Energy of Canada, Ltd., Ottawa, Ontario, Canada. (2) Precipitation method for the separation of plutonium and rare earths. Stanley G. Thompson, inventors. No. 2,934,402 assigned to USAEC. (3) Recovery of americium. Milton Ader, Herbert H. Hyman, inventors. No. 2,934,403 assigned to USAEC. (4) Scavenger and process of scavenging. Carl M. Olson, inventor. No. 2,934,404 assigned to USAEC. (5) Method for purifying uranium. James B. Knighton, Harold M. Feder, inventors. No. 2,934,425 assigned to USAEC. (6) Process of electroplating metals with aluminum. William C. Schickner, inventor. No. 2,934,478 assigned to USAEC. (7) Nuclear reactor fuel element and method of manufacture. Harvey Brooks, inventor. No. 2,934,482 assigned to USAEC. (8) Process of making fuel elements for neutronic reactors and articles produced thereby. William A. Bostrom, Raymond B. Roof, Jr., inventors. No. 2,934,483 assigned to USAEC. (9) Granulation method. Fred A. Bickford, Forest I. Peters, inventors. No. 2,933,766 assigned to USAEC.

PATENTS ISSUED May 3, 1960 to PRIVATE ORGANIZATIONS AND/OR INDIVIDUALS: (1) Continuously readable dosimeters. Arthur L. Tirico, inventor. No. 2,935,613 assigned to Texaco, Inc. (2) Radioactive prospecting. Charles F. Teichmann, Clifford G. Ludeman, inventors. No. 2,935,614 assigned to Texaco Development Corp., New York. (3) Well logging tool fluid displacer. Martin E. True, inventor. No. 2,935,615 assigned to Jersey Production Research Co., Tulsa, Okla. (4) Radiation shielding container. Richard J. Smith, Jr., Arnold J. Baldwin, inventors. No. 2,935,616 assigned to Farrel-Birmingham Co., Inc., Ansonia, Conn. (5) Radiation emitting target cooler. Beldon A. Peters, inventor. No. 2,935,633 assigned to Jersey Production Research Co., Tulsa, Okla.

PATENTS ISSUED May 3, 1960 to GOVERNMENTAL ORGANIZATIONS: (1) Control rod alloy containing noble metal additions. William K. Anderson, William E. Ray, inventors. No. 2,935,401 assigned to USAEC. (2) Variable area control rod for nuclear reactor. Norman E. Huston, inventor. No. 2,935,456 assigned to USAEC. (3) Frequency stabilizing system. Quentin A. Kerns, Oscar A. Anderson, inventors. No. 2,935,686 assigned to USAEC.

NEW BOOKS & OTHER PUBLICATIONS...

Beryllium. G. E. Darwin, J. H. Buddery. No. 7 in the series on the metallurgy of the rarer metals from this publisher. 383 pages.--Butterworth & Co., Ltd., Toronto 6, Ontario, Canada. ($13.50)

Beryllium. Donald E. Eilertsen. 8 pages. (10¢).....Thorium, James Paone. 10 pages. (10¢). These are preprint chapters from the Bureau of Mines 1960 edition of Mineral Facts and Problems.--Superintendent of Documents, Wash. 25, D.C.

Toxicity of Beryllium. Review by J. Cholak, L. H. Miller, Frank Princi, of Kettering Laboratory, University of Cincinnati, Ohio. 30 pages. No. PB-161319. (75¢).....Global Fallout and Its Variability. E. A. Martell, Air Force Cambridge Research Center, Bedford, Mass. 37 pages. No. PB-161345. ($1.00).....Heat Capacity of Beryllium. J. W. Holladay, Battelle Memorial Institute, Columbus, Ohio. 11 pages. No. PB-161186. (50¢).....Office of Technical Services, Wash. 25, D.C.

Decontamination of Fission Products and Other Atomic Bomb Detonation Debris. C. F. Miller, et al, Naval Radiological Defense Laboratory, San Francisco, Calif. 46 pages. No. PB-145026. (Microfilm, $3.30; Photostat, $7.80).....Massive Dose Irradiation of the Mammalian Central Nervous System. Jack M. Ginsburg, David D. Ulmer, Army Medical Research Laboratory, Fort Knox, Ky. (Microfilm, $2.70; Photostat, $4.80) -- Library of Congress, Washington 25, D.C.

NEW PRODUCTS, PROCESSES, INSTRUMENTS...

NEW PRODUCTS: New instrument, modification of this manufacturer's direct reading optical emission spectrometer, makes possible convenient analyses of uranium isotopes U-235, U-236, and U-238. Both enriched and depleted samples can be analyzed with accuracy comparable to mass-spectrometer methods now in general use. The unit consists of this firm's automatic optical servo monitor in the Spectromet model of its standard direct reading spectrometer in combination with a special diffraction grating and a three-prism beam-splitter. (First customer for this unit is the atomic power equipment division of General Electric Co., San Jose, Calif., who will use it to inventory stocks of variously enriched uranium oxides used in fuel elements.)--Baird-Atomic, Inc., Cambridge 38, Mass.

New scintillation counting system, Model MSC-173, uses a standard Marinelli beaker with a sodium iodide crystal and phototube combination for counting large volumes of iodine-131 and cobalt-60 in solution form. The unit is built around a 3/4" D. x 3" canned sodium iodide crystal coupled to a photomultiplier tube and followed by a preamplifier. The Marinelli beaker, holding up to 150 ml of solution, fits around the top of the detector. The glass tube through the center of the beaker surrounds the crystal and permits good geometry for the solution.....Model LMR-168 Laboratory count rate meter, manufactured by Sharp Laboratories, Inc., La Jolla, Calif., is now distributed exclusively by this firm. It is a multi-purpose unit which gives visual and aural indications of radioactivity for continuous background monitoring; classroom demonstrations; medical isotope studies; measurements of radioactive contaminations; etc.--Atomic Accessories, Inc., Valley Stream, N.Y.

Model 607-X gamma and x-ray detector is a portable unit with specially constructed internal shielding for making x-ray measurements accurate to plus-or-minus 15% over the energy level of 100 to 600 kev in the presence of high-intensity, rf pulses, or other types of electromagnetic, magnetic and electrical fields. The unit is for detection and measurement of x-rays produced as secondary emission from radar transmitters, magnetrons, klystrons, high-potential cathode ray tubes, rectifiers and beam-type tubes.--Universal Transistor Products Corp., Westbury, L.I., New York.

PRODUCT NEWS: Some 222,787 pounds of heavy water were sold to six countries in 1959 by the USAEC, and 51,546 pounds leased to two other countries, according to Commission figures. Sales were made to Canada (98,000 lbs.); W. Germany (71,000 lbs.); Japan (20,000 lbs.); Denmark (12,787 lbs.); France (11,000 lbs.); and Switzerland (10,000 lbs.). The Commission charged $28.00 per pound to cover production cost, plant depreciation and administrative expense. There were also additional charges for packinging, handling and cost of stainless steel containers. Lease agreements, made with India (29,500 lbs.) and Denmark (22,046 lbs.), call for 4% annual interest on monetary value of the material.

Process has been developed by Spencer Chemical Co. to make "arc-fused" cyrstalline uranium dioxide, thorium dioxide, uraniathoria, triuranium octoxide, and uranium mono- and dicarbides. Spencer people point out that nuclear fuel elements are cheaper to make with crystalline forms of the fuels, since fuel rods can be made simply by compacting the crystalline materials inside a tube. There is a cut in fuel loss during fabrication (0.25% compared with 1% for ceramics), while reprocess scrap is down to less than 5% from 15 to 20%, Spencer notes.

MANUFACTURERS' LITERATURE: New bulletin, GEA-7006A, of General Electric Co., describes the company's line of nuclear instruments and the range of instrumentation system-design services the firm offers. Copies of the bulletin may be obtained from GE's Apparatus Sales Division, Schenectady, N.Y.....Atomlight for April, 1960, is available on request to New England Nuclear Corp., Boston 18, Mass.....Kennametal heavy tungsten alloys, with radioactive shielding applications, are covered in a new 8-page bulletin that may be obtained on request to the company at Latrobe, Pa..... Bulletin No. 3658 of Machinery & Allied Products Institute discusses indemnity and insurance as it concerns USAEC licensees and contractors. The bulletin, which includes a reprint of Federal Register items, may be obtained from the Institute at 1200 Eighteenth St., N.W., Washington 6, D.C.

Sincerely,

The Staff
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